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ROBERT E. McKECHNIE, 1890.

NOTES ON A RECENT EPIDEMIC OF SMALL-POX.

BY

ROBERT E. McKECHNIE, M.D., Nanaimo, B.C.

During November and December last we had about thirty cases of small-pox here and, as the type was abnormal and apt to lead to errors of diagnosis in the mild cases, I thought my experience might be valuable to the profession.

We traced the origin of our epidemic to Rosslyn, a coal-mining town on the Northern Pacific Railway in the State of Washington. Some 1300 cases occurred there without a death, and without a correct diagnosis. After the State authorities woke up and took the matter in hand with the diagnosis of a "contagious eruptive fever", by rigid quarantine it was speedily repressed. But many cases still exist throughout the State, forming centres from which, in this era of open and rapid

communication, it may spread to remote parts by the mail or by travellers.

My first case began with a slight chill, moderate fever, headache, a sore throat, and myalgic pains. The next day papules appeared on the face, trunk, and extremities, some of which were already vesicular. Two vesicles were also present on the soft palate. There was no sign of umbilication, nor was there any pain in the back. I did not see the case again for three days, when I found that the greater portion of the eruption had become pustular. The temperature and pulse were now normal and the patient eating heartily, only complaining of the soreness

of his skin, especially of his back where the tops had been scraped off the pustules by lying on them. The rash was universal, very thick on the face and back, and could also be felt on the soles and palms. Probably five per cent. of the vesicles and pustules showed a slight umbilication, but on careful examination under a lens, I found a hair in the centre of each umbilication. The eruption was very superficial with but slightly inflamed base to each vesicle or pustule. There was no tendency to coalesce, nor was the intervening skin either swollen or reddened.

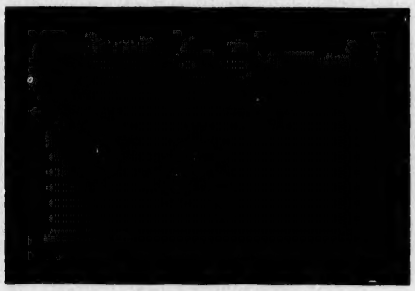
I diagnosed the case as a very severe attack of varicella, by the papules appearing so early, becoming vesicular at once, becoming pustules inside of 24 hours, by the absence of severe constitutional symptoms with so very extensive a rash, by the absence of the characteristic smallpox

backache, by there being no smallpox odour, by the absence of secondary fever and of true umbilication, by the presence in town of many cases of chickenpox, which the patient had never had, and by the fact that there was no case of smallpox in the province, and the patient had not been out of town for months. Still I was wrong, as subsequent events proved, there having been four cases which showed true umbilication, although in other respects the cases were atypical.

The seventh case occurred in a woman who was confined one day, had a chill with temperature of 102° F. the next, an extensive measley rash the following day, which in twenty-four hours gave place to a papular eruption, which changed at once to a vesicular.

From a study of the thirty cases I have noted the following points: The first symptoms are like an attack of la grippe with, in half the cases, a sore throat, and no backache. I noted but one case which had this latter symptom, which yielded to a single dose of Dover's powder. There is a premonitory chill with elevation of temperature, myalgic pains, headache, vomiting generally, and the most constant symptom of all, sleeplessness. Nearly every case begged for something to induce sleep, so that I came to regard this as the most suspicious symptom before the rash appeared.

The initial temperature may be high or not, but did not average over 102½°, may last but one day or up to three, when there is a drop. Se-



condary fever is rare, about 99° being the average, with normal pulse, a strong appetite, and a general feeling of being quite well shortly after the rash appears.

The rash may appear as early as twenty-four hours after the initial symptoms, or as late as the third day, but the majority of cases developed it on the third day. The forehead and backs of the wrists are first affected. The papules may run through the vesicular stage into the pustular inside of two days, and begin to scab before pustulation would be reached in the ordinary type of the disease. The rash may be very extensive, or may be limited to a few scattered papules, etc. The photograph shown of two sisters in the same stage of the attack, illustrates this very well. Of the other photographs, one is that of a negro showing the abdomen, feet and legs in a severe type, another the rash on a sole and palm on the severer case of the two girls, and the last the arms of a moderate case.

Umbilication may be entirely absent or may be present in as high as 25 per cent. of the vesicles, but I have noticed that with an oblique light on the vesicles in early stage there is a distinct flattening of their summits, which is fairly marked in the majority of cases and represents an attempt at umbilication. The rash appears in most cases on the soles and palms, not so early as elsewhere, but can be felt before being seen.

There is very little inflammatory thickening of the skin even in cases where the rash is so extensive as to have the vesicles almost touching. An inflammatory halo can invaribaly be seen around the base of each pustule, but may be very faint. The thickness of the skin covering the vesicles on the backs of the wrists should be noted, as the deep-seated character of the eruption is there best seen. These vesicles are usually of a good size, very firm and tense, and pustulate much slower than those on the other parts of the body.

Contagion is not very great. Thus the first case, living in a hotel with isolation but imperfectly carried out, infected but four persons.

Several of the cases show slight pitting which may disappear eventually, but one case will have permanent marks.

The mortality is nil.

Formalin was used as an disinfectant with no failure, and is, I think, an ideal agent. Its acid fumes are readily neutralised by ammonia, either sprinkled on the floor or exposed in shallow pans in the rooms.